Remarks/Arguments:

This is a reply to the office action of October 4, 2006.

Claims 20 - 28 and 38 were rejected as indefinite under section 112 because of the use of the Latin term "in situ". Claim 20 has been amended above to clarify what is meant. We respectfully submit that the term is definite, in the context of this application. The skilled man would understand it means "in place", and more particularly, that the short-lived radioactive isotope is produced at the place where the marking operation is carried out, and nowhere else. Moreover, given the short half-life of the used isotopes, he would understand that the generation of the radioactive isotopes only occurs during performance of the claimed method. The ordinarily skilled person would understand that, due to the short half-life of the isotopes involved, it is impossible to generate those isotopes at a remote location and transport them to the location where the marking operation is carried out. According to the preferred embodiment of the present invention, this is achieved by providing the device with a nuclide generator.

The claims were also rejected as anticipated by (claims 20 - 28 and 38) or obvious over (claims 29 - 37) Carden's Patent No. 6,086,942. The prior art rejections are respectfully traversed for the following reasons:

Carden discloses the manufacturing of devices for brachytherapy. Such devices are implanted into the body of a patient to treat tumors by releasing radiation. In Carden, a specific amount of a radioactive material is applied at a specific location of the brachytherapy device by ink-jet printing. Carden uses a suitable precursor material (such as a specific ink-jet printing ink composition) which is subsequently made radioactive by bombardment with neutrons.

Carden does not anticipate the invention of claims 20 - 38 for the following reasons:

First of all, no short-lived radioactive isotopes are generated in Carden *in situ* from a longer-lived radioactive precursor isotope. In fact, the precursor material (the ink) used by Carden is not radioactive at all. It only becomes radioactive after bombardment with neutrons. This is a different process than that presently claimed. We submit that the step of generating a short-lived radioactive isotope *in situ* from a longer-lived radioactive precursor isotope is not derivable from Carden. For this reason alone, claims 20 and all the other claims of the present application are deemed novel over Carden.

Secondly, we disagree with the examiner's position that Carden would use a short-lived radioactive isotope as defined in the present specification at all. In the present specification, page 3, second but last paragraph, the term "short-lived" is defined to mean a radioactive isotope having a half-lifetime between a minute and a day. This limitation, previously contained in claim 21, has been added to claim 20 above. No such radioactive isotope is described in Carden. The most preferred radioactive isotopes used in Carden (column 12, lines 29 to 31), are Pd-103 and I-125. However, as can be gathered from this passage in Carden, those isotopes have a half-life much longer than one day, i.e. 17 days and 60 days respectively. Carden's claim 16 does mention Y-90 as a possible isotope; however, this isotope Y-90 is not disclosed or claimed in the present application. Yttrium has numerous isotopes, only one of which (Y-89) is stable. As can be seen from the present specification (middle of page 8) Y-90 has a half-life of 64 hours (more than 2.5 days). Thus even Y-90 is distinguished from the limitation of a short-lived isotope, as the term is defined.
An isotope disclosed and covered by the present claims is a different isotope, Y-90m. This isotope has a half-life of 3.19 hours (see page 8, middle of the present specification). Thus the isotope mentioned in Carden is not the same isotope claimed in the present application, and would not be suitable for the purposes of the present

invention. It would not make any sense to use in Carden such short-lived isotopes as Y-90m, because Carden aims at positioning within the body of a patient a radioactive source for locally destroying a tumor. The desired effect can obviously not be obtained if for this purpose a very short-lived isotope is used: it would simply disappear before having any adverse effect on the tumor. In order to obtain a therapeutic effect, Carden has to use isotopes having a half-life of several days at the least.

Given the above significant differences, Carden does not anticipate the invention claimed; moreover, Carden does not render obvious any of the claims presented.

Carden is not related at all with a method of temporarily marking an object for the purposes of distinction in a process chain. Rather, Carden is in an entirely different field, that of treating cancer. This has nothing to do with the subject matter of the present invention. It is therefore not surprising that the method and device suggested by Carden differs significantly from the method and device of the present invention. In Carden, no "short-lived" radioactive isotopes – as defined in claim 20 – are used. To the contrary, such short-lived isotopes would be unsuitable for the purposes of Carden.

Conversely, for the purposes of the present invention, Carden's longer half-life isotopes would not be useful, because the radioactive isotopes have to disappear as soon as possible, so as not to be detectable after their initial purpose has been achieved.

In summary, a skilled man would not get any motivation from Carden to use short-lived radioactive isotopes for the temporary marking of objects in a process chain. Carden does not disclose such short-lived isotopes, and is not related to the field or marking objects. Rather, Carden is related to the treatment of cancer, i.e. to a completely different technical field. We therefore respectfully submit that the subject

matter of the present invention is not rendered obvious by Carden, and that this application is in proper condition for allowance.

Respectfully submitted,

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